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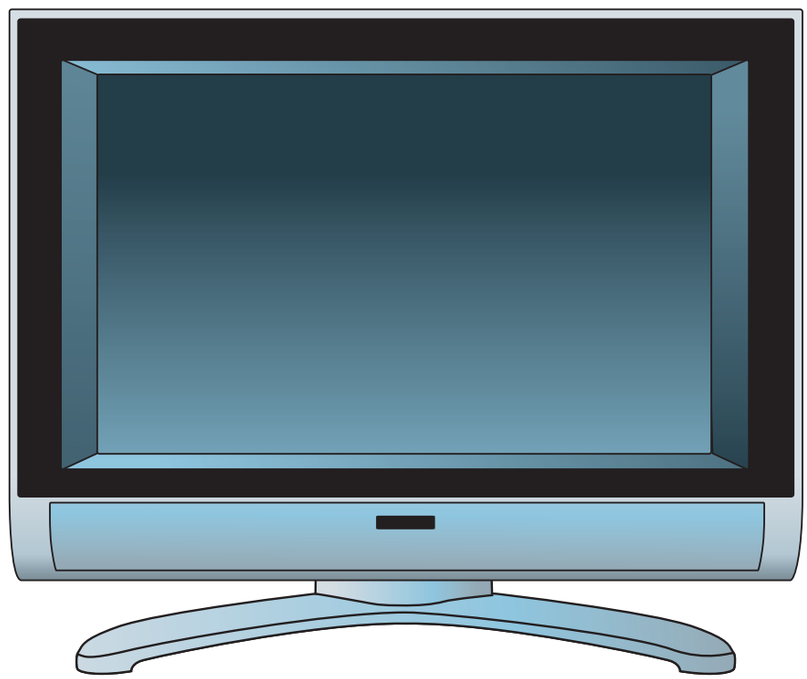
More for your money

PLTV-32C

# 32" Liquid Crystal Display

User's Manual



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Protron PLTV-32C Liquid Crystal Display User's Manual.

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# Product Cautions

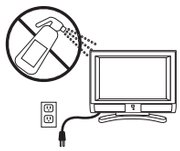
TO PREVENT POSSIBLE DANGER, ELECTRIC SHOCK, AND OTHER INJURIES WHEN HANDLING YOUR DISPLAY, PLEASE BE AWARE OF OF ALL WARNINGS AND SAFETY PRECAUTIONS LISTED BELOW.

Never spill any liquid of any kind on the display.

Never insert anything into the display, where objects can come into contact with high voltage nodes or damage internal components.

Do not attempt to service the display yourself. Opening or removing covers exposes high voltage nodes and other hazards. Refer all servicing to qualified service personnel.

Do not touch the display or antenna during thunderstorms. Unplug the display during thunderstorms or if it will not be used for extended periods. Failure to do so may result in electric shock or fire.



Before cleaning the display, unplug it from the wall. Use a damp cloth for cleaning. Never use liquid or aerosol cleaners.

To prevent overheating and ensure reliable operation, place the display only in a well ventilated location. Avoid cramped or inadequately ventilated locations. Place the display at least 10 cm (4") from walls or other objects. Always keep the vent clean. Never place the display upside down.

**Note:** Read all safety and operating instructions before operating your new display.

# Conformity and Compliance

## FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (this can be determined by turning the device off and on), the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

***Caution:***

To comply with the limits for an FCC Class B computing device, the user should use the shielded signal cable and power cord supplied with the unit. The FCC warns that changes or modifications of the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## Radio Frequency Interference Statement

***Warning:***

This is a Class B product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

## Canadian DOC Notice for Class B Computing Devices

This digital apparatus does not exceed the Class B limits for radio noise emissions from a digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

## CE Marking and Declaration of Conformity

This device complies with the requirements of related European standards, which include the following:

- Emission: EN 55022, EN 61000-3-2, EN 61000-3-3
- Immunity: EN 50082-1
- Safety: EN 60950 Low-Voltage Directive (73/23/EEC)

CE

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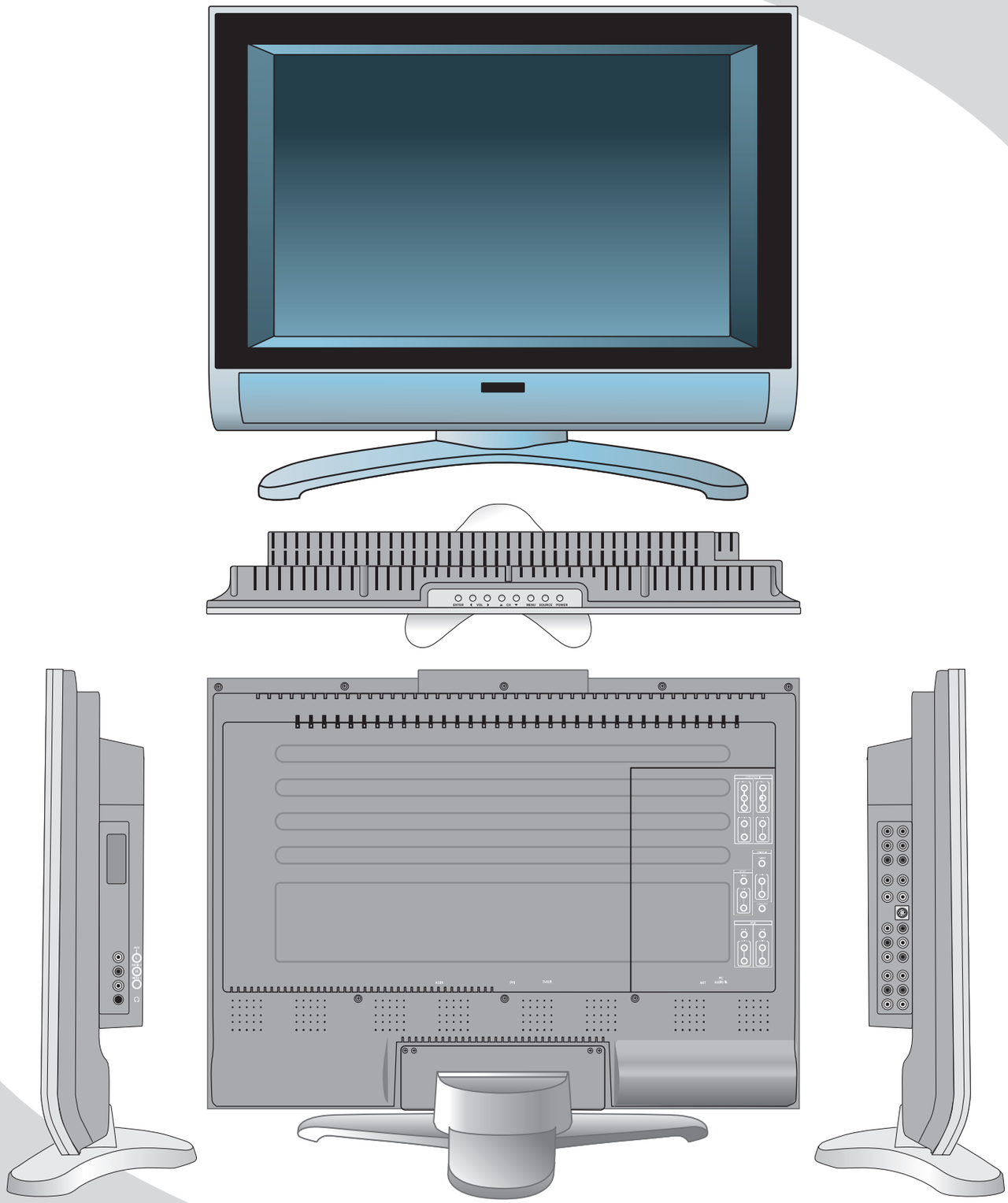

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# Introduction

Congratulations on purchasing your new Protron 32" Liquid Crystal Display!

You can use your new display as a television, in a home theater system, or even as a computer monitor. With component, composite, and S-Video video inputs, you can connect numerous devices to your display, including DVD players, VCRs, HDTV receivers, video game systems, camcorders, and so on. And with video and audio output, you can connect your display to a home stereo system with a subwoofer, or even record what is displayed on the screen.

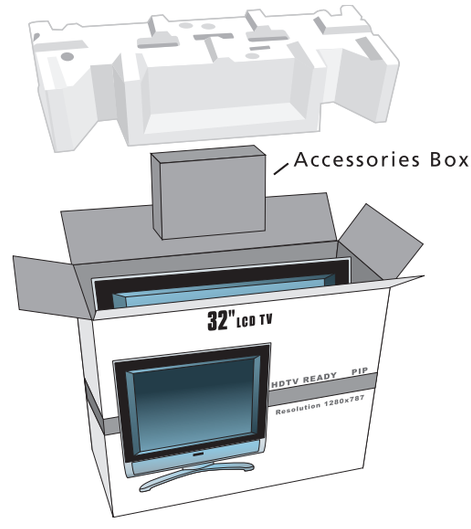
The progressive scan and interlaced component video inputs on your display give you the highest quality video available, allowing you to view crystal-clear DVDs and HDTV. With a resolution of 1366 × 768, your display gives you plenty of high-resolution screen real estate when connected to a computer.

## Features

- 32" viewable display area
- Analog TV tuner with coaxial input
- Progressive scan component video input
- Interlaced component video input
- 3 composite video inputs
- S-Video input
- 6 audio inputs, one for each video input
- Composite video output
- Audio output with subwoofer output
- VGA and DVI computer video inputs
- 1/8" stereo audio input jack for computer audio
- 1366 × 768 resolution
- Wide viewing angle
- Digital character smoothing
- Versatile, functional, and user-friendly On-Screen Display (OSD)
- VESA DPMS-compliant power saving—automatically turns off the display after a configurable period of inactivity
- Windows 95/98/2000/XP Plug and Play compliant
- Conforms to VESA standards and supports the DDC1 and DDC2B specifications.

# Unpacking Your New Display

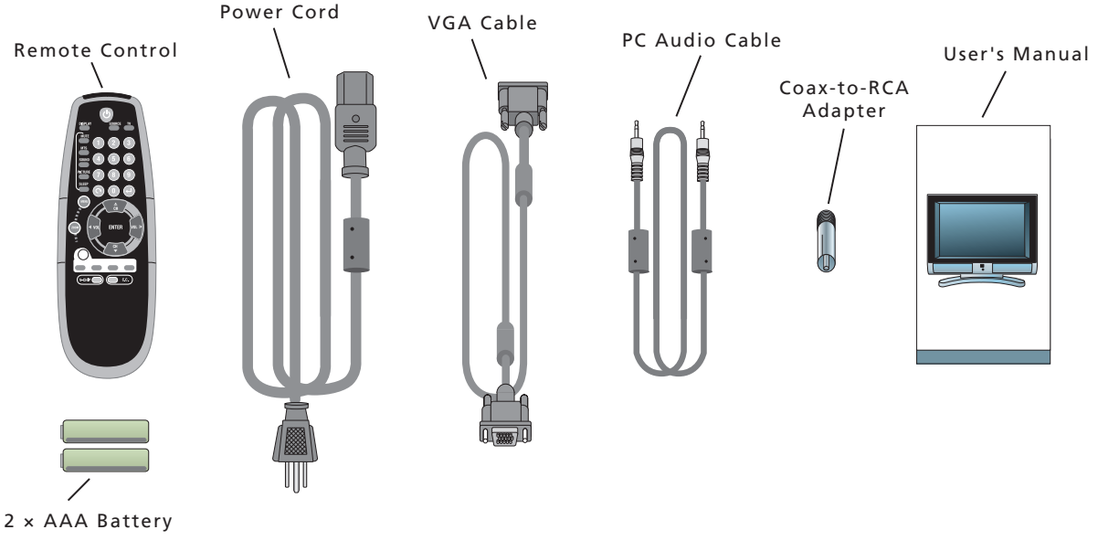
Before using your new display, you should unpack the contents of the box and check to make sure everything is present and undamaged.




***To unpack the display:***

1. Set the box upright near the intended display location.
2. Open the top set of flaps.
3. Remove the styrofoam pad from the top of the display.
4. Remove the accessories box from behind the display and set it aside.
5. Lift the display out of the box and set it aside.

The accessories box should contain the items indicated below. If any items are missing or damaged, contact the seller immediately.

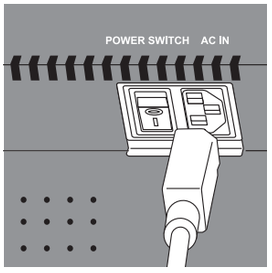


# Setting Up the Display

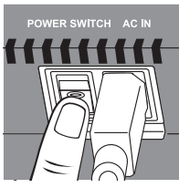
The display requires a stable, level, and clean surface near a power outlet, 10 cm (4") away from walls or other large objects. The rear ventilation grid should be unobstructed, and the display should not be exposed to water or heat. Before setting up the display, prepare such a space.

***To set up the display:***

1. Remove the protective plastic bag and plastic screen protector from the display.
2. Remove the power cord from the accessories box, insert the appropriate end into the power (AC IN) connector on the bottom of the display, and then insert the other end into a free power outlet.

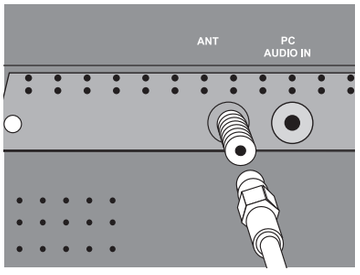



3. Turn on the power switch on the bottom of the display.




## Connecting to a TV Signal Source

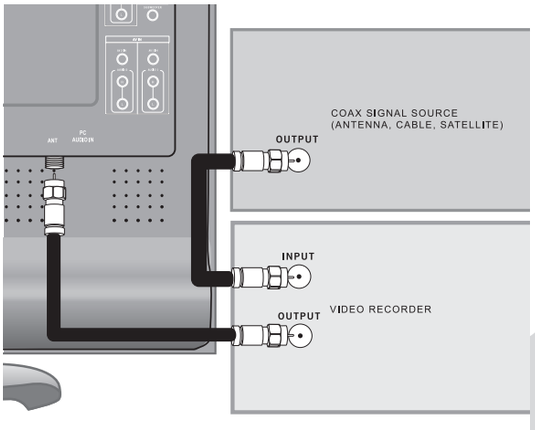
A TV signal may come from a cable box, satellite receiver, antenna, or similar device.




***To connect a TV signal source to the display:***

1. Remove the coax-to-RCA adapter from the Accessories Box and insert it into the antenna (ANT) jack on the bottom of the display.
2. Connect a coax cable between the adapter and TV signal source (for example, a cable box, satellite receiver, or antenna).

**Note:** If you would like to be able to record the TV signal with a VCR, DVD recorder, or similar device, connect the TV signal source to the input of the recording device with one cable, then connect the output of the recording device to the ANT jack on the display with another cable.



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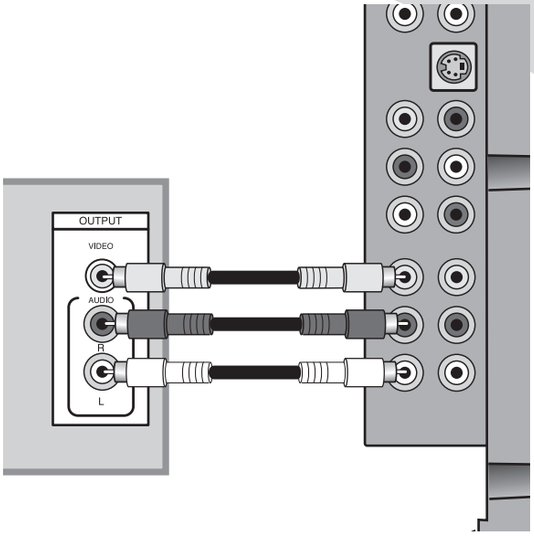
## Connecting to Composite Video Output Devices

Many video devices, such as VCRs, DVD players, video game systems, and camcorders, have composite video outputs. Composite video uses one RCA cable to transmit video information and generally provides lower quality than S-Video and component video (see below).



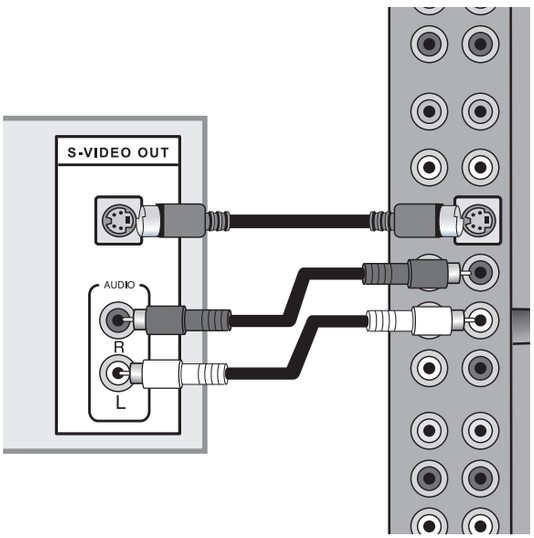

***To connect a composite video source to the display:***

1. Using an RCA cable, connect the composite video output (yellow) on the source device to the corresponding jack in one of the three composite video blocks on the display (AV 1 IN, AV 2 IN, or AV 3 IN).
2. Using two RCA cables, connect the right (red) and left (white) audio outputs on the source to the corresponding jacks in the same composite video block used above.

## Connecting to S-Video Output Devices

Many video devices that have composite video outputs also have S-Video outputs. S-Video uses a single four-wire cable to transmit video information. Two of the wires are used to transmit video. Because it splits the video signal into two components, S-Video generally provides higher quality than composite video, but lower quality than component video (see below).

**Note:** The pins used in S-Video connectors are somewhat fragile. Take care to avoid bending the pins, as a bent or broken pin can cause loss of color information or total signal loss.




***To connect an S-Video source to the display:***

1. Using an S-Video cable, connect the S-Video output on the source device to the S-Video jack on the display.
2. Using two RCA cables, connect the right (red) and left (white) audio outputs on the source to the corresponding jacks in the S-Video block on the display.

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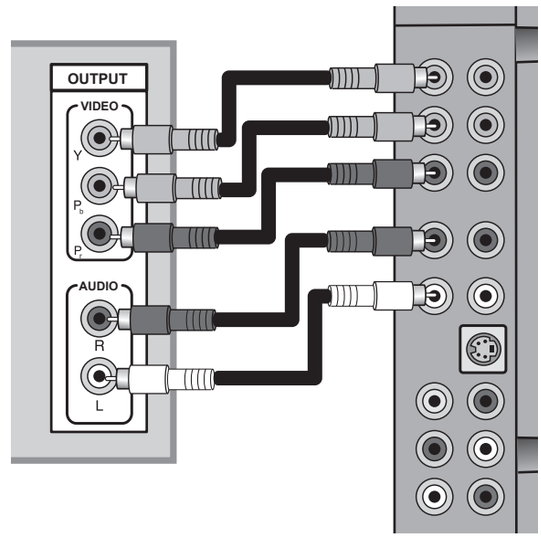
## Connecting to Component Video Output Devices

High-quality video devices, such as HDTV receivers and high-end DVD players, have component video outputs. Component video uses three RCA connections to transmit video information. Because the information is split into three signals, component video offers higher quality than composite video and S-Video.




**Note:** There are two component video signal types: *progressive scan* and *interlaced*. When connecting a progressive scan signal, use the Y, Pb, and Pr inputs. When connecting an interlaced signal, use the Y, Cb, and Cr inputs.

***To connect a component video source to the display:***

1. Using three RCA cables, connect the three component video outputs to the corresponding jacks in one of the two component video blocks on the display:

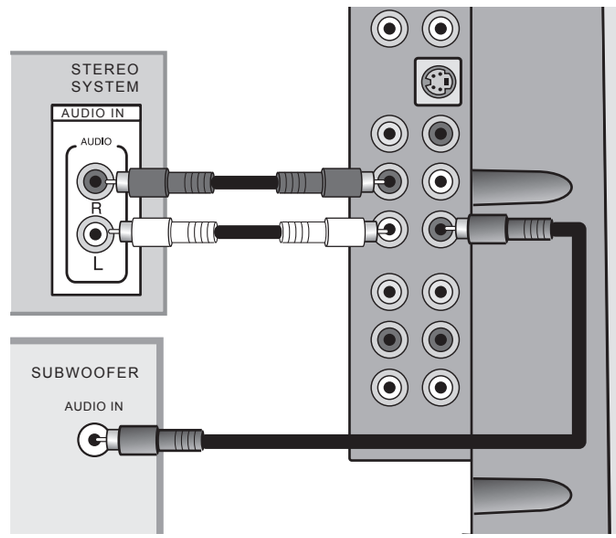
   If you are connecting a progressive scan video signal, use the Y, Pb, and Pr inputs.

   If you are connecting an interlaced video signal, use the Y, Cb, and Cr inputs.

2. Using two RCA cables, connect the right (red) and left (white) audio outputs on the source to the corresponding jacks in the same component video block used above.

## Connecting to a Peripheral Audio System

Your display has audio outputs that may be used to play the display's audio on a peripheral system, such as a stereo system or a home theater system. In addition, there is a subwoofer output that can be used to fill out the bass.




***To connect the display to a peripheral audio system:***

1. Using two RCA cables, connect the right (red) and left (white) audio outputs in the output block on the display (AV OUT) to the corresponding inputs on your audio system.

2. (OPTIONAL) If you have a subwoofer, connect a third RCA cable from the SUBWOOFER output on the display to the subwoofer's input.

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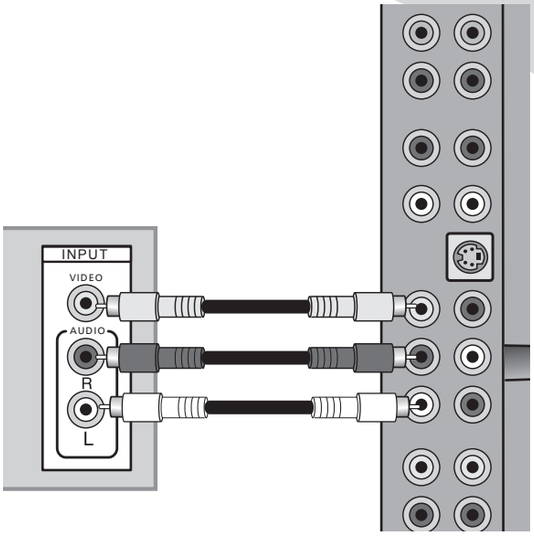
## Connecting to a Video Input System

There is a composite video output on the display that may be used to transmit the currently displayed video to other video input devices, such as video recorders or other displays.




***To connect the display to a video input system:***

1. Using an RCA cable, connect the composite video output (yellow) in the output block on the display (AV OUT) to the corresponding jack on the video input system.
2. Using two RCA cables, connect the right (red) and left (white) audio outputs in the AV OUT block to the corresponding inputs on the video input system.

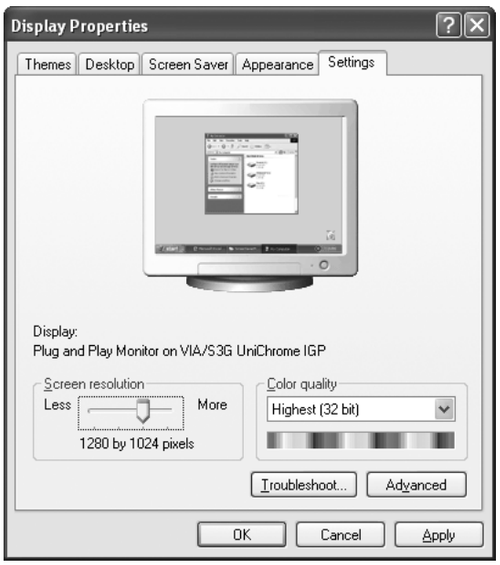
## Connecting to a PC

Your display can be used as a computer monitor for any computer with a VGA or DVI video output. In addition, the computer's audio output can be connected to the display and played through the display's speakers.

***To connect a PC to the display:***

1. Set the video resolution on the computer to 1280 × 1024 or less before connecting to the display.

   In Windows, right-click on the desktop and select **Properties** to bring up the Display Properties window. Select the **Settings** tab. Adjust the **Screen resolution** as needed, select **Apply**, then select **OK**.



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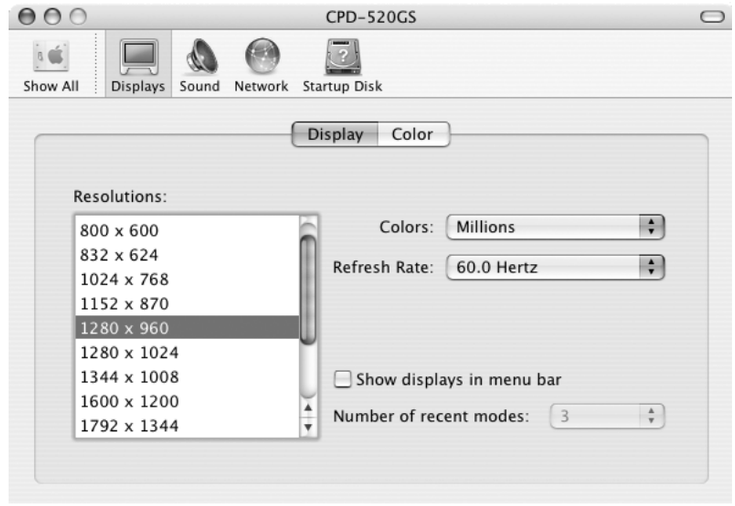
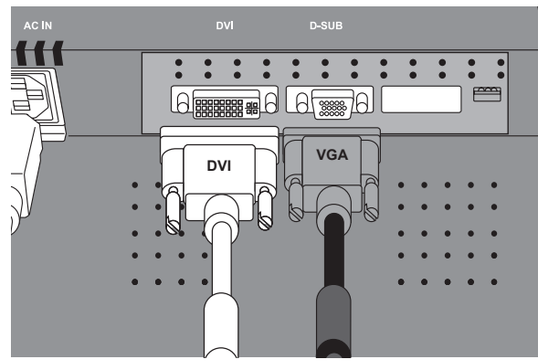
In Mac OS X, select **System Preferences** under the Apple menu. Open the **Displays** panel and select the **Display** tab. Select the desired resolution from the list.

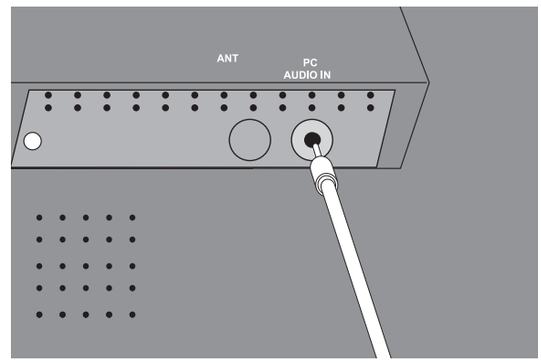



2. If your computer has a DVI output, connect a DVI cable between the DVI output on the computer and the DVI input on the bottom of the display.

   If your computer has a VGA output only, connect the VGA cable included in the Accessories Box between the VGA output on the computer and the VGA input on the display.




3. (OPTIONAL) Using the audio cable included in the Accessories Box, connect the computer's audio output (LINE OUT) to the audio input on the bottom of the display (PC AUDIO IN).



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# Operating the Display

## Turning the Display On and Off

There is a power switch on the bottom of the display and a power button on top. The power switch is used to cut off power completely, whereas the power button turns the screen off but allows the remote to continue working.

***To turn the display on:***

1. If the power light on the front of the display is off, turn on the power switch on the bottom of the display.
2. Press the **POWER** button.

***To turn the display off:***

1. Press the **POWER** button.
2. If the display will be unused for an extended period of time, turn off the power switch on the bottom of the display and disconnect the power.

## Selecting the Video and Audio Source

The signal source may come from any of the input blocks on the sides or bottom of the display. The **SOURCE** button cycles through these.

***To change the audio/video source:***

1. Press the **SOURCE** button until the correct source is selected.

   The **SOURCE** button cycles through the following sources:

   - TV
   - VGA
   - DVI
   - S-Video
   - AV 1
   - AV 2
   - AV 3
   - Component 1
   - Component 2

***To switch the audio/video source directly to TV:***

1. Press the **TV** button on the remote.

## Adjusting the Volume

The audio volume may be adjusted from the remote or the top of the display.

***To change the volume:***

1. Press the **VOL** ◄ and **VOL** ► buttons.

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## Selecting the Channel

The channel may be selected from the remote or the top of the display.

***To change the channel:***

1. Ensure the source is set to TV.
2. Press the **CH ▲** and **CH ▼** buttons.

***To change to a particular channel directly:***

1. Ensure the source is set to TV.
2. Enter the desired channel number on the remote's keypad.
3. Press **ENTER**.

## Accessing the On-Screen Display

The On-Screen Display allows you to configure the operation of the display. You can change video and audio settings, activate and configure picture-in-picture (PIP) and closed captioning, select television channels, control access to mature programming, and configure other general display behavior. See "Configuring the Display" on page 13 for more information.

***To access the OSD:***

1. Press the **MENU** button.

# Using Your Display for the First Time

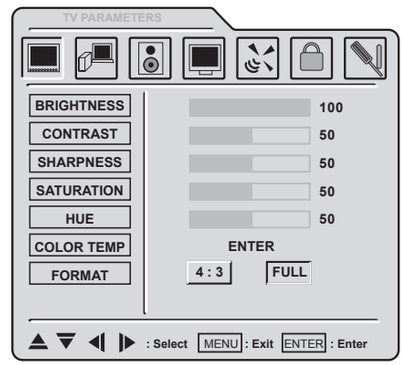
When you turn on your LCD for the first time, you will need to set up the display for proper operation by scanning the television spectrum for available channels.

## Setting up Television Channels

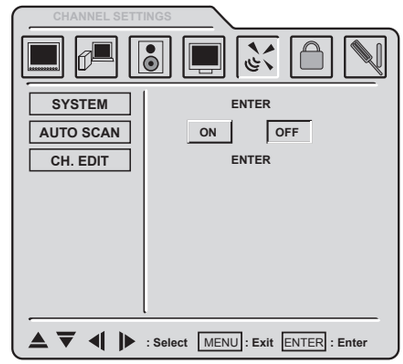
Once the television signal is connected to the display, if you are connecting directly to a wall jack or antenna, you should scan the signal spectrum to weed out channels with insufficient signal strength. This will make it much easier to navigate through the channels.

***To scan the signal spectrum:***

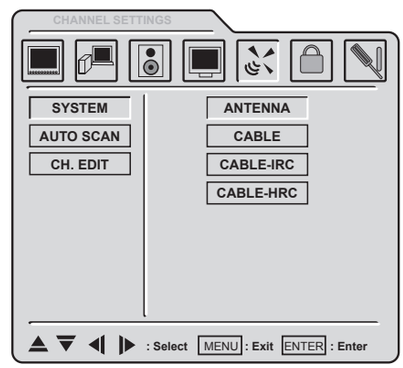
1. Turn the display on using the **POWER** button.
2. Press the **MENU** button to bring up the On-Screen Display (OSD).




3. Press the **VOL** ▶ button until the Channel Settings menu shows.
4. Press the **ENTER** button to enter the menu.

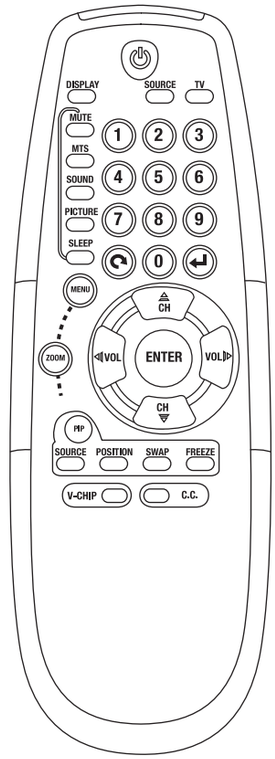



5. Press the **ENTER** button again to enter the System sub-menu.
6. Press the **CH** ▲ and **CH** ▼ buttons until the appropriate system is highlighted, then press the **ENTER** button to select it.
7. Press **MENU** to return to the previous menu.
8. Press **CH** ▼ until the Auto Scan sub-menu is highlighted and then press **ENTER** to select it. The display will automatically scan all television channels for those with a signal. You can press **MENU** at any time to stop the process.



# Using the Remote Control

The remote control can be used to control every aspect of the display's operation and includes more functionality than the controls on top of the display.




The following is a list of all buttons on the remote and their functions:

| Button | Function |
|---|---|
| | Turns the display on and off |
| TV | Sets the signal source directly to TV |
| SOURCE | Selects the signal source: TV, VGA, DVI, S-Video, AV 1, AV 2, AV 3, Component 1, or Component 2 |
| DISPLAY | Displays current source and television channel information |
| Keypad | Used to enter numbers on the display and to select the television channel |
| MUTE | Mutes the audio |
| MTS | Selects the television audio channel: Mono, Stereo, or SAP |

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| Button | Function |
|---|---|
| SOUND | Selects the sound enhancement mode: Off, SRS (surround sound), or BBE |
| PICTURE | Adjusts the display color: Soft, Standard, Cool, or User-Defined |
| SLEEP | Sets the display sleep timer. The timer can be turned off or set to 10, 20, 30, 60, 90, or 120 minutes. |
| | Switches to the channel number entered via the keypad |
| | Returns to the previous channel |
| MENU | Brings up the On-Screen Display |
| ZOOM | Switches between the two display formats: 16:9 (wide-screen) and 4:3 |
| ENTER | Selects the highlighted item or confirms the current adjustment |
| CH ▲ CH ▼ | Selects the television channel |
| VOL ◀ VOL ▶ | Adjusts the audio volume |
| PIP | Turns PIP on and off |
| SOURCE | When PIP is active, selects the signal source used for the secondary PIP window |
| POSITION | When PIP is active, adjusts the position of the secondary PIP window |
| SWAP | When PIP is active, swaps the primary and secondary sources |
| FREEZE | When PIP is active, freezes the primary PIP screen |
| V-CHIP | Turns V-Chip protection on and off |
| C.C. | Turns closed captioning on and off |

**Note:** To use a universal remote with your display, program the remote to control any NEC television.

# Configuring the Display

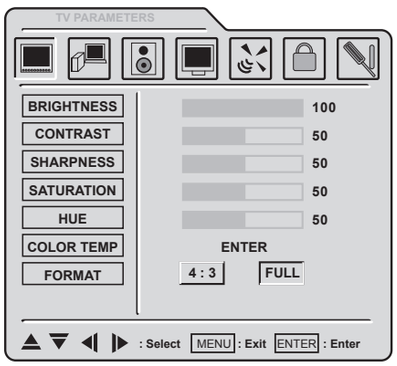
The On-Screen Display (OSD) allows you to configure the operation of the LCD. You can change video and audio settings, activate and configure picture-in-picture (PIP) and closed captioning, select television channels, control access to mature programming, and configure other general display behavior.

***To use the OSD:***

1. Press the **MENU** button on the remote or the top of the display.
2. Once the OSD appears, use the **VOL ◄** and **VOL ►** buttons to navigate the menus represented by icons at the top of the OSD.
3. Press the **ENTER** button to select the desired menu.
4. Use the **CH ▲** and **CH ▼** buttons to navigate the menu items.
5. Press the **ENTER** button to select the desired item.
6. If "ENTER" is displayed next to the item name, a sub-menu will appear upon pressing **ENTER**. Repeat steps 4 and 5 to navigate the sub-menu.
7. If the selected item is an adjustable parameter, use **VOL ◄** and **VOL ►** to adjust the parameter and then press **ENTER** to accept.
8. Press **MENU** to return to the previous menu and, finally, exit the OSD.

## TV Parameters

The TV Parameters menu allows you to change the video options used while watching television. You can adjust the following parameters.




**Brightness**

Sets the brightness of the display image.

**Contrast**

Sets the variation between light and dark colors.

**Sharpness**

Sets the image sharpness.

**Saturation**

Sets the saturation of color in the display image.

**Hue**

Sets the intensity of color in the display image.

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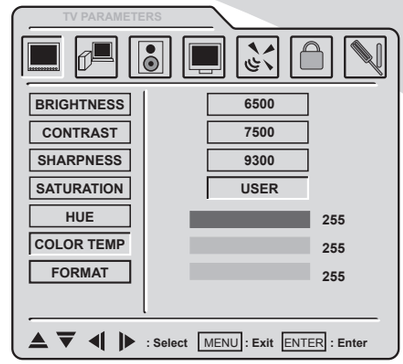
### Color Temp

A sub-menu that sets the color temperature used. The options are 6500K, 7500K, 9300K, and a user-defined setting.

To set the user-defined color temperature, select the **USER** option and adjust the levels of red, green, and blue to be used to produce white.

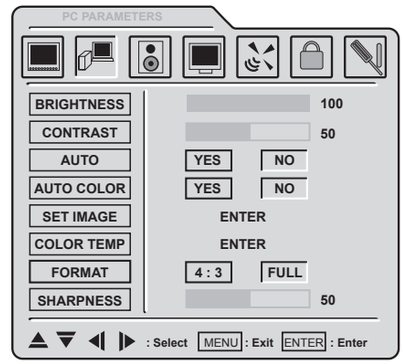



### Format

Controls the picture format. The options are 4:3 and Full (16:9—widescreen).

## PC Parameters

The PC Parameters menu allows you to change the video options used with a VGA or DVI video source. You can adjust the following parameters.




### Brightness

Sets the brightness of the display image.

### Contrast

Sets the variation between light and dark colors.

### Auto

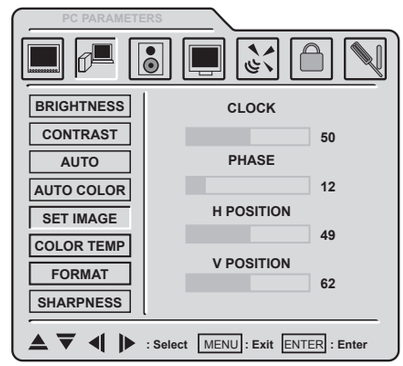
When turned on, automatically adjusts the image position.

### Auto Color

When turned on, automatically adjusts the color balance of the image.

### Set Image

A sub-menu that controls PC video transmission parameters:




- **Clock**—Sets the clock frequency used.
- **Phase**—Controls the phase offset used.
- **H Position**—Adjusts the horizontal position of the image.
- **V Position**—Adjusts the vertical position of the image.

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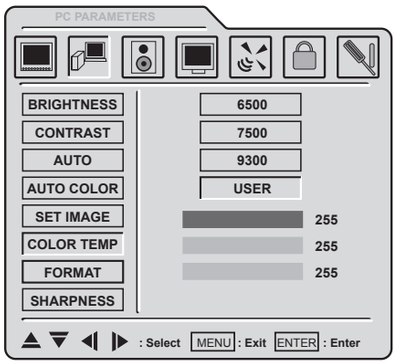
### Color Temp

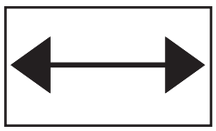
A sub-menu that sets the color temperature used. The options are 6500K, 7500K, 9300K, and a user-defined setting.

To set the user-defined color temperature, select the **USER** option and adjust the levels of red, green, and blue to be used to produce white.




### Format

Controls the picture format. The options are 4:3 and Full (16:9—widescreen).



FULL

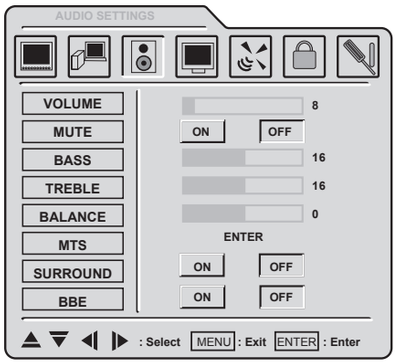
4:3

### Sharpness

Sets the image sharpness.

## Audio Settings

The Audio Settings menu allows you to change the way audio is played, including volume, equalization, and other sound processing. You can change the following settings.




### Volume

Controls the audio volume.

### Mute

Mutes the audio.

### Bass

Adjusts the volume of bass in the audio.

### Treble

Adjusts the volume of treble in the audio.

### Balance

Sets the relative volumes of the left and right speakers.

**MTS**

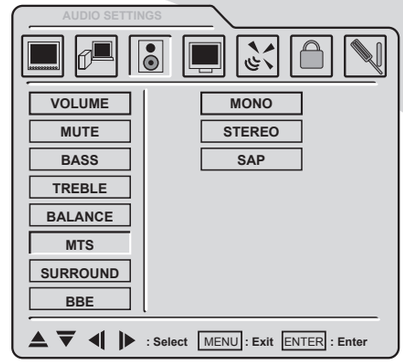
A sub-menu that selects the MTS (Multichannel Television Sound) channel played back while watching television. The options are Mono, Stereo, and SAP (Secondary Audio Programming).

**Surround**

Turns surround sound on and off.

**BBE**

Turns BBE, an audio enhancement algorithm, on and off.




## Picture-In-Picture

PIP allows you to watch video from two sources simultaneously, though only one source can be the television signal. The table below gives all possible combinations.

| | Primary Video Source | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Secondary Video Source** | **TV** | **VGA** | **DVI** | **S-Video** | **AV 1** | **AV 2** | **AV 3** | **Comp. 1** | **Comp. 2** |
| **TV** | | • | • | | | | | | • |
| **VGA** | • | | • | • | • | • | • | • | |
| **DVI** | • | • | | • | • | • | • | • | • |
| **S-Video** | | • | • | | | | | | • |
| **AV 1** | | • | • | | | | | | • |
| **AV 2** | | • | • | | | | | | • |
| **AV 3** | | • | • | | | | | | • |
| **Comp. 1** | | • | • | | | | | | |
| **Comp. 2** | • | | • | • | • | • | • | | |

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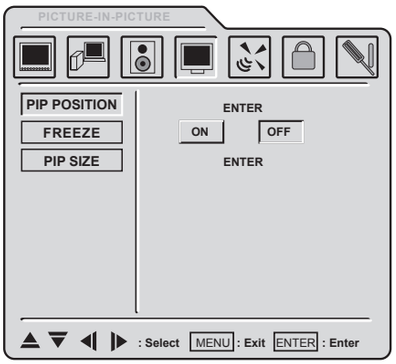
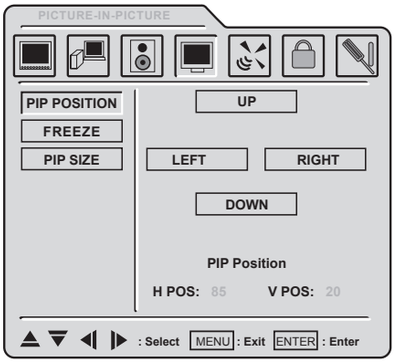
The Picture-In-Picture menu allows you to turn on PIP and change the mode, source, and position of PIP. The following parameters may be set:




**PIP Position**

A sub-menu that controls the position of the secondary video window when PIP is turned on. Use the four direction options repeatedly to move the window around the screen.

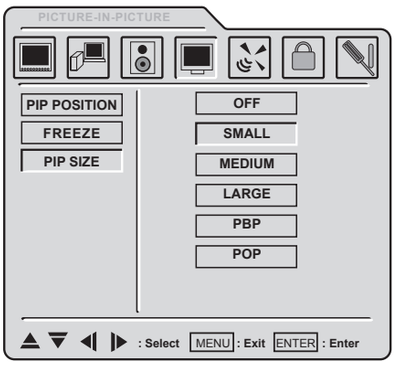



**Freeze**

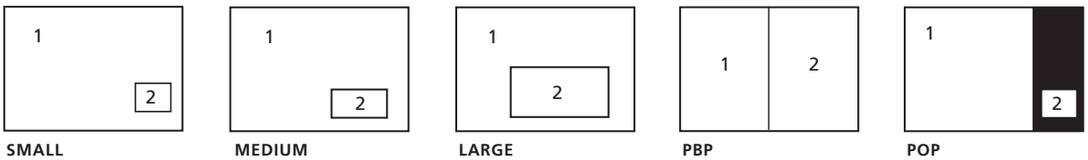
When PIP is on, freezes the main window.

**PIP Size**

A sub-menu that sets the size and type of the PIP window. The options are as follows:




- **Off**—Turns PIP off
- **Small**—Small PIP window
- **Medium**—Medium PIP window
- **Large**—Large PIP window
- **PBP**—Splits the screen in half, uses one half for the primary video, and uses the other for the secondary video
- **POP**—Reduces the size of the primary video window and places a small PIP window outside the main window



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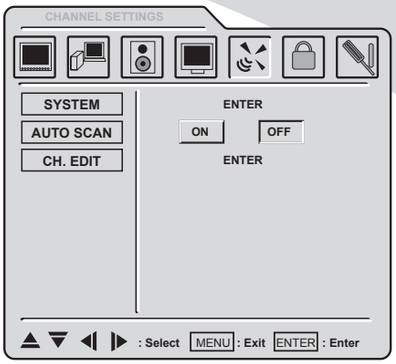
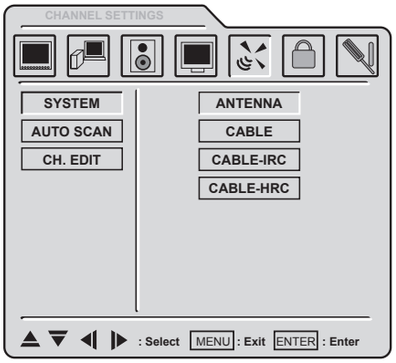
## Channel Settings

The Channel Settings menu allows you to select which television channels are available for viewing, manually or automatically. It contains the following menu items.




### System

A sub-menu that sets the type of television signal source in use. The options are as follows:



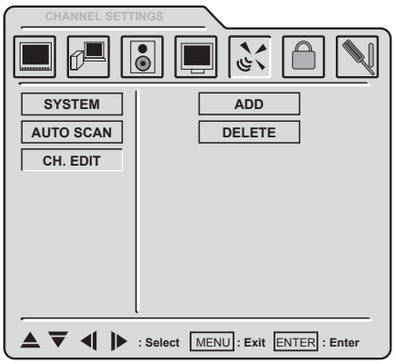

- **Antenna**—A standard television antenna
- **Cable**—A cable TV signal
- **Cable-IRC**—A type of cable signal primarily used on the east coast of the US
- **Cable-HRC**—A type of cable signal primarily used on the west coast of the US

### Auto Scan

When selected, automatically scans all television channels for valid signals and makes unavailable any channels with insufficient signal strength.

### Ch. Edit

A sub-menu that allows you to manually add and delete available channels. Select **ADD** to make the current channel available and **DELETE** to make it unavailable.



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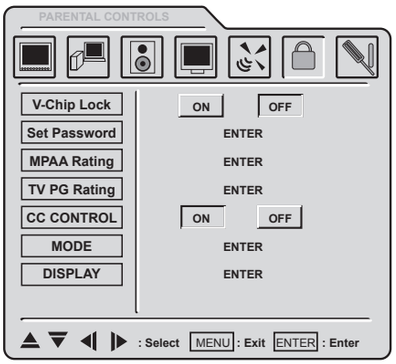
## Parental Controls

The Parental Controls menu allows you to control access to television content based on industry maturity ratings. In addition, you can activate and configure closed captioning. The following menu items are available.




**Note:** The V-Chip will not function when the signal source is set to Component 2.

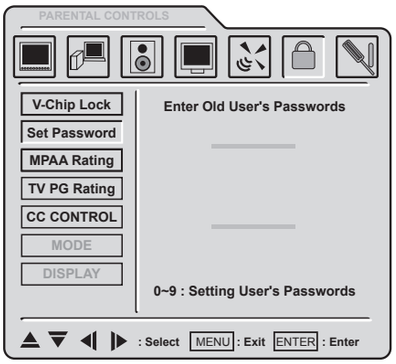
### V-Chip Lock

When turned on, blocks access to mature television and movie content, based on the MPAA and TV PG ratings selected below, unless the viewer enters a password (set below).

### Set Password

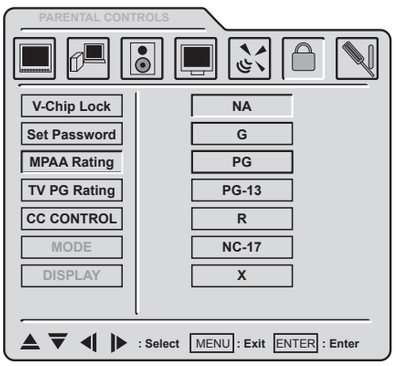
Sets the V-Chip password. To change the password, enter the current password followed by the new password.

The factory-default password is '1234'.




### MPAA Rating

A sub-menu that sets the MPAA (Motion Picture Association of America) rating level the V-Chip will block without a password. The V-Chip will block all levels above that selected. The options are as follows:




- **NA**—All ratings unblocked
- **G**—General audiences (all ages)
- **PG**—Parental guidance suggested (some material may not be suitable for children)
- **PG-13**—Parents strongly cautioned (some material may be inappropriate for children under 13)
- **R**—Restricted (minors under 17 require an accompanying parent or adult guardian)
- **NC-17**—No one under 17 admitted
- **X**—Adults only (no one under 17 admitted)

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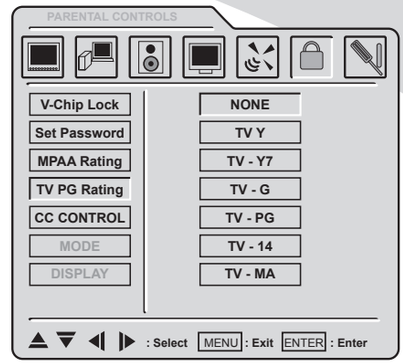
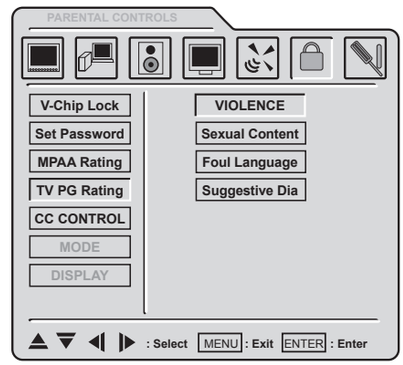
### TV PG Rating

A sub-menu that sets the TV PG rating level the V-Chip will block without a password. The V-Chip will block all levels above that selected. In addition, specific types of mature content can be blocked for some of the ratings. For example, programs rated TV-7 with violent content can be blocked. The options are as follows:




- **NONE**—All ratings unblocked
- **TV-Y**—All children
- **TV-Y7**—Children 7 years and older. Violent content can be blocked (see below).
- **TV-G**—General audience
- **TV-PG**—Parental guidance suggested. Violence, sexual content, foul language, and suggestive dialog can be blocked (see below).
- **TV-14**—Parents strongly cautioned. Violence, sexual content, foul language, and suggestive dialog can be blocked (see below).
- **TV-MA**—Mature audience only. Violence, sexual content, and foul language can be blocked (see below).



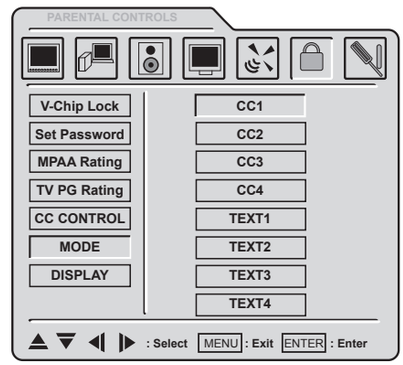

Upon selection of a rating, a second menu will appear if specific content types can be blocked (see the example to the right).

### CC Control

Turns closed captioning on and off. Closed captioning displays the dialog of the current program on the screen so it may be read.

### Mode

A sub-menu that sets the mode used for closed captioning. The options are as follows:




**Note:** Closed captioning must be turned on for this menu to be active.

- **CC1**—The most-used closed caption channel
- **CC2**—Usually used for foreign language translations
- **CC3**
- **CC4**
- **TEXT1**—Text channels usually used for other channel information
- **TEXT2**
- **TEXT3**
- **TEXT4**

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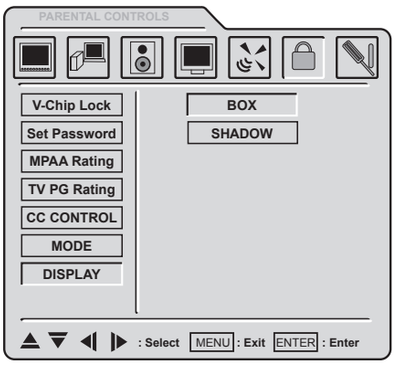
The CC1–4 modes are generally used for dialog captions and display only a few lines of text at the bottom of the screen. The TEXT1–4 modes are generally used for information and scroll text across the entire screen.

### Display

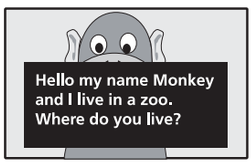
Controls how closed caption text is displayed on the screen. The options are as follows:



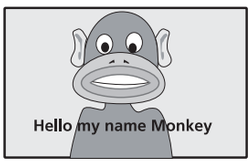

**Note:** Closed captioning must be turned on for this menu to be active.

- **Box**—Displays white text in a black box, blocking out the video
- **Shadow**—Displays black text directly on the video

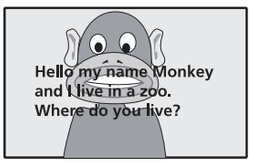
MODE: CC1–4
DISPLAY: BOX




MODE: TEXT1–4
DISPLAY: BOX



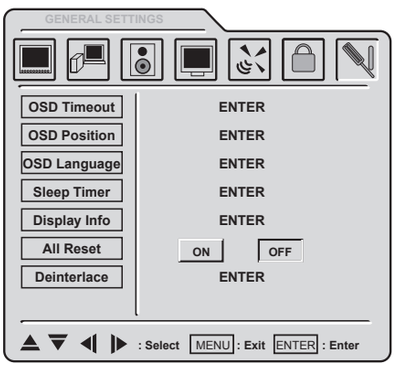

MODE: CC1–4
DISPLAY: SHADOW




MODE: TEXT1–4
DISPLAY: SHADOW

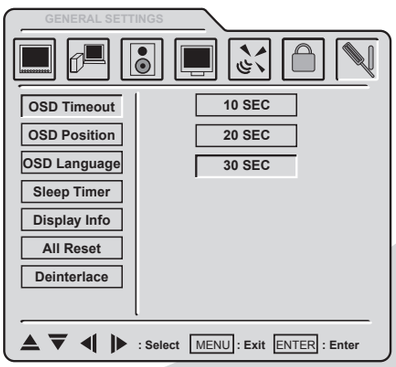
## General Settings

The General Settings menu contains general display settings, such as OSD options and timeouts. It contains the following menu items.




### OSD Timeout

A sub-menu that sets the timeout for the OSD. The options are 10, 20, and 30 seconds.



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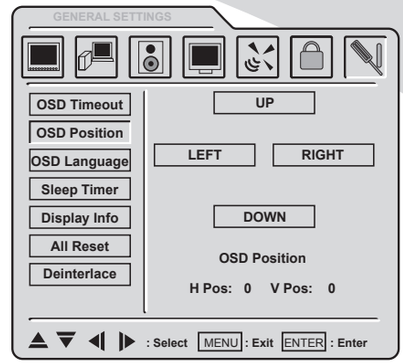
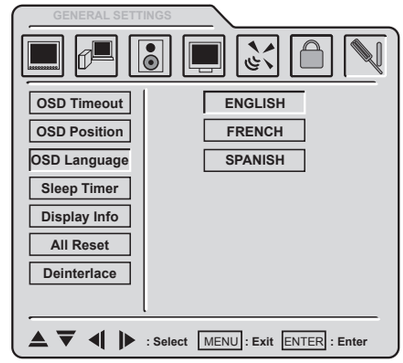
### OSD Position

A sub-menu that controls the position of the OSD on the screen. Use the four direction controls to move the OSD to the desired position.



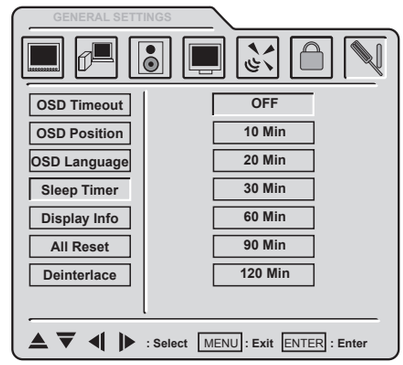

### OSD Language

A sub-menu that selects the language used for the OSD. The options are English, French, and Spanish.




### Sleep Timer

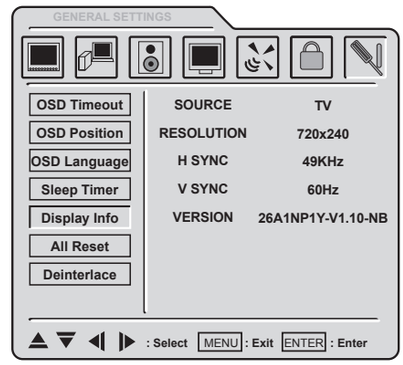
A sub-menu that activates and sets a sleep timer that automatically puts the display into standby mode when there is no activity for a specified period. The timer may be turned off or set to 10, 20, 30, 60, 90, or 120 minutes.




### Display Info

Press **ENTER** to show information about the display:

- **Source**—The currently selected signal source
- **Resolution**—The resolution of the image on the display
- **H Sync**—The horizontal sync frequency
- **V Sync**—The vertical sync frequency (frame/field rate)
- **Version**—The version of the firmware currently installed on the display



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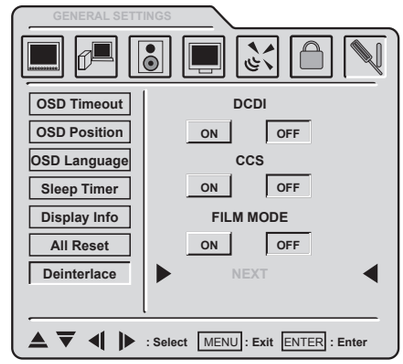
### All Reset

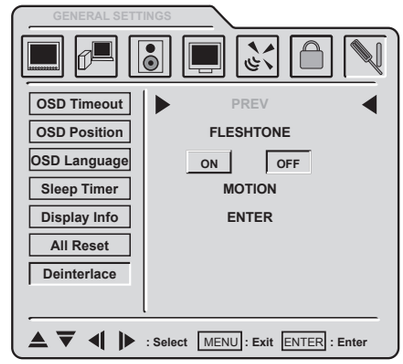
Resets all options to factory-default settings.

### Deinterlace

A sub-menu that controls how the display deinterlaces interlaced video before displaying it on the screen. The following options may be set (note that there are two pages to the sub-menu—select **NEXT** to advance to the next page):

- **DCDI**—Processes the deinterlaced image to produce smooth images without staircasing
- **CCS**—Removes "false color" artifacts caused by improper signal separation in low-cost video devices
- **Film Mode**—Removes artifacts from 2:2 and 3:2 pulldown material
- **Fleshtone**—Improves skin tone in program material
- **Motion**—Removes motion-related artifacts from program material by comparing sections of the image from field to field. The section size can be set via this sub-menu. There are three options: small, medium, and large.



# Troubleshooting

| Symptom | Possible Cause | Resolution |
|---|---|---|
| No picture (power indicator does not light up) | Power cord not securely connected | Make sure the power cord is firmly inserted into the socket and outlet. |
| | Power switch is off | Turn on the power switch. |
| | Power outlet is off or not working | Try plugging a different device into the outlet and see if it turns on. If not, turn on the outlet or use a different outlet. |
| No picture (power indicator is red) | The display is in power-saving mode | If in VGA or DVI mode, press a key on the keyboard or move the mouse. Otherwise, press a button on the remote. |
| | The display is off | Press the **POWER** button on the remote or on top of the display. |
| No picture (power indicator is green) | No signal | Make sure the proper source is selected. If there is still no picture, check the signal cable(s) and signal source. |
| | Contrast or brightness too low | Adjust the contrast and/or brightness until picture appears. |
| Unclear or noisy picture | Signal cable(s) not securely connected | Make sure the signal cable(s) are firmly connected. |
| | Poor TV signal | Check the TV signal. If using an antenna, adjust the position for better signal. If using cable or satellite TV, contact your service provider. |
| No sound | Audio cable(s) not securely connected | Make sure the audio signal cable(s) are firmly connected. |
| | Headphones plugged in | Unplug the headphones. |
| | Audio muted | Unmute the audio by pressing the **MUTE** button on the remote. |
| Display is too dark or too bright | Contrast or brightness too low or too high | Adjust the contrast and/or brightness to desired setting. |
| Display not centered | Position incorrectly adjusted in OSD | Adjust **H Position** and **V Position** in the Set Image sub-menu under the PC Parameters menu in the OSD. |
| Image vibrating | Signal cable(s) not securely connected | Make sure the signal cable(s) are firmly connected. |
| | Power voltage too high or too low | Check the power source to make sure it matches the display specification. Try a different power outlet on a different circuit. |

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| Symptom | Possible Cause | Resolution |
|---|---|---|
| After-image remains on screen after display is turned off | Inherent LCD characteristics | This is characteristic of an LCD. The after-image will disappear after a few minutes. |
| Distorted image | Display format set incorrectly | Check that the correct **Format** is selected in the TV Parameters or PC Parameters menu in the OSD. |
| "Out of Range" message on screen | VGA or DVI input signal is not in a supported mode | Adjust the resolution and refresh rate on the PC to match a supported mode, listed under "Specifications" on page 26. |
| Red, green, blue, or white dots on screen | Inherent LCD characteristics | This is characteristic of an LCD and will not cause a malfunction. |
| Remote control not functioning | Batteries inserted improperly | Make sure the batteries are inserted and oriented properly. |
| | Batteries low on energy | Replace the batteries. |
| | A button is stuck | Jog any stuck buttons on the remote to unstick them. |
| | Obstacle between remote and display | Remove the obstacle. |
| | The remote is too far from the display | Move closer to the display. |

**Note:** Further troubleshooting information can be found on the Protron website at www.protronusa.com.

## Support Information

Do not return this product to your retailer until you have performed the steps laid out in the Easy Setup Instructions and contacted the customer service center. Merchandise may not be returned to Protron without a return form authorization.

Before contacting Protron customer service, please record the following information, which may be found on the back of your display:

- Model Number
- Serial Number
- Date of Manufacture

The Protron customer service center may be contacted 24 hours a day, 7 days a week at the following number:

**1-888-257-8899**

# Specifications

## General

| | |
|---|---|
| **Dimensions** | 33.07"W × 25.83"H × 9.09"D |
| **Weight** | 45.54lbs |
| **Panel Type** | Active Matrix TFT LCD |
| **Screen Size** | 32" widescreen (16:9) |
| **Color Range** | 24 bits (16.7 million colors) |
| **Max. Resolution** | 1366 × 768 |
| **Pixel Pitch** | 0.51075mm (H) × 0.51075mm (V) |
| **Sync Range** | Horizontal: 30–80kHz<br>Vertical: 50–75Hz |
| **Contrast Ratio** | 800:1 |
| **Brightness** | 500 cd/$m^2$ |
| **Viewing Angle** | Vertical: +/–85°<br>Horizontal: +/–85° |
| **Response Time** | Rise: 12ms<br>Fall: 12ms |
| **Inputs** | 1 × progressive scan component video (RCA)<br>1 × interlaced component video (RCA)<br>3 × composite video (RCA)<br>1 × S-Video<br>6 × stereo audio (RCA)<br>1 × SVGA (15-pin D-Sub)<br>1 × DVI-D (single link)<br>1 × stereo audio line in, 0 dBV nominal (1/8" TRS) |
| **Outputs** | 1 x composite video (RCA)<br>1 × stereo audio (RCA)<br>1 × subwoofer (RCA)<br>1 × headphone (1/8" TRS) |
| **TV Tuner** | NTSC-M, CATV, 181 channels |
| **TV Formats Supported** | SDTV: 480i<br>EDTV: 480p<br>HDTV: 720p, 1080i |
| **TV Audio** | MTS (mono, stereo, SAP), SRS, BBE |
| **Parental Controls** | V-Chip (TV PG, MPAA) |
| **Picture-In-Picture** | PIP, PBP, POP |
| **Closed Captioning** | CC1–4, TEXT1–4 |
| **Speakers** | 2 × 10W |
| **Plug and Play Compliance** | VESA DDC1, DDC2B |
| **Power Supply** | 100–240VAC, 50–60Hz |
| **Power Consumption** | 232W max. |
| **Storage Temperature** | 0 to 60°C |
| **Operating Temperature** | 5 to 35°C |

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## Supported VGA Timing Modes

| Display Resolution | Vertical Frequency (Refresh Rate) | Horizontal Frequency |
|---|---|---|
| 640 × 480 | 60Hz | 31.5kHz |
| | 72Hz | 37.9kHz |
| | 75Hz | 37.5kHz |
| | 85Hz | 43.3kHz |
| 720 × 400 | 85Hz | 37.9kHz |
| 800 × 600 | 56Hz | 35.1kHz |
| | 60Hz | 37.9kHz |
| | | 48.4kHz |
| | 70Hz | 56.5kHz |
| | 72Hz | 48.1kHz |
| | 75Hz | 46.9kHz |
| | | 60.0kHz |
| | 85Hz | 53.7kHz |
| | | 68.7kHz |
| 1280 × 1024 | 75Hz | 80.0kHz |

PROTRON
More for your money

# Limited Warranty

Protron warrants this product to be free from manufacturing defects in material and workmanship under normal use for the period listed at the bottom of this section.

***How to obtain service:***

- Call the Protron Customer Support line at 1-888-257-8899. If the issue cannot be resolved over the phone, a service tag number will be issued, and the nearest authorized Protron Service Center will be identified for you.
- For televisions with screen sizes of 26" or less, you will be requested to bring your unit into the authorized service center and pick up when repairs are complete.
- For televisions with screen sizes 27" and above, you may request in-home service from an authorized Protron Service Center, provided that your television is located within the geographic territory covered by an authorized Protron Service Center. If in-home service is not available in your area, you must take your television to the Service Center location at your own expense, or pay for the additional cost that the Service Center may charge to transport your television to and from your home.
- Proof of purchase in the form of a bill of sale or receipted invoice with product name, model and/or serial #, which provides evidence that the product is within the warranty period, must be presented to obtain warranty service.

***This warranty does not cover:***

- Physical or cosmetic damages.
- Damage caused by abuse and/ or neglect.
- Ordinary adjustments as outlined in the owners manual that can be performed by the customer.
- Damage to equipment not properly connected to the product.
- Any cost incurred in shipping the product for repair.
- Signal reception problems caused by external antenna, cable systems or interference.
- Incompatibility due to a change in TV/CATV broadcast systems after the product was sold.
- Batteries.
- Images burnt on to the screen.
- Initial installation and related adjustments.
- Power surge and/or damage by lightning.
- Force majeure or uncontrollable external force damage.
- Product shipped for service with inadequate packaging or packaging materials.

***What we will do:***

- Protron will reimburse an authorized Protron Service Center the labor charges to repair your television.
- Protron will reimburse an authorized Protron Service Center for the new, or at our discretion, refurbished replacement parts required to repair your television.

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***This warranty is void if:***

- Product is used in a commercial application or rental.
- Damaged through misuse, negligence or abuse.
- Modified or repaired by anyone other than authorized PROTRON service center.
- Damaged because it is improperly connected to any other equipment.
- If the original proof of purchase cannot be supplied.
- If the identifiable markings on the TV such as Serial # are defaced, unrecognizable, or missing.
- The product is used outside the country in which it was originally sold.

This warranty is not transferable and only applies to the original purchase. Any implied warranties, including the warranty of merchantability, are limited in duration to the period of this expressed warranty and no warranty whether expressed or implied shall apply to the product thereafter. Under no circumstance shall PROTRON be liable for any loss or consequential damage arising out of the use of this product. This warranty gives specific legal right. However, you may have other rights that may vary from state/province to state/province. Some state/province do not allow limitations on implied warranties or exclusions of consequential damage. Therefore these restrictions may not apply to you.

**26" and below: 1 year parts/labor Depot Warranty**

**27" and above: 1 year parts/labor In-home Warranty**

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**Protron Digital Corporation**

http://www.protronusa.com/

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